

TER-O10

0022610-26829960

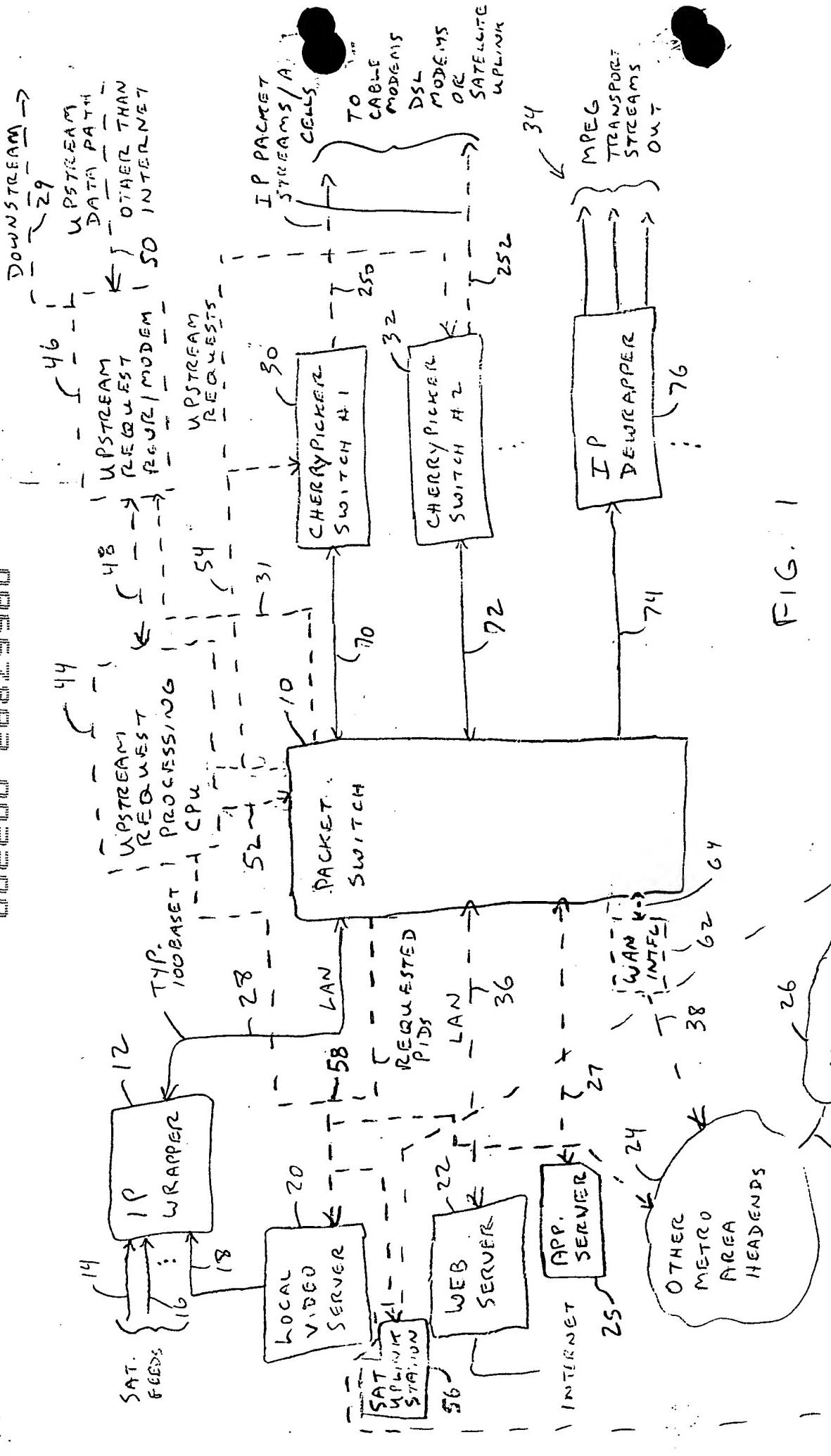


FIG. 1

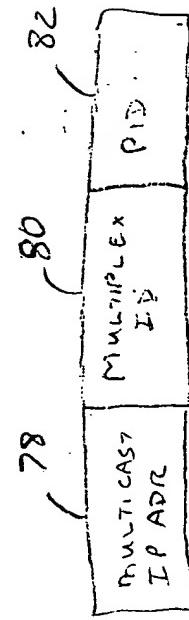


FIG. 2  
IP WRAPPER GENERATED MULTICAST IP ADDRESS

## PROCESS OF ENCAPSULATION CARRIED OUT IN IP WRAPPER FPGA

00000000000000000000000000000000

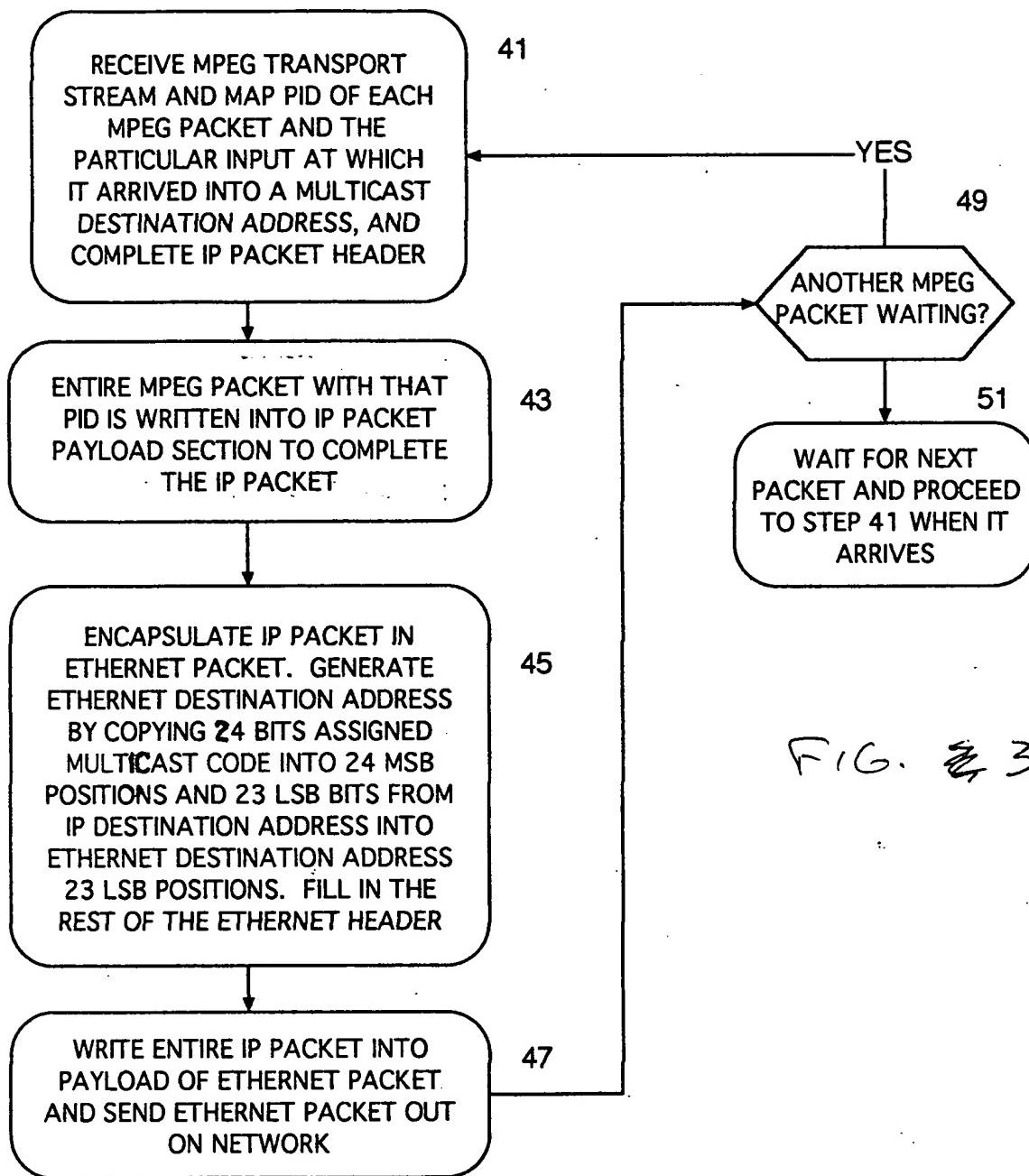


FIG. 3

PREFERRED ENCAPSULATION PROCESS CARRIED OUT BY IP WRAPPER

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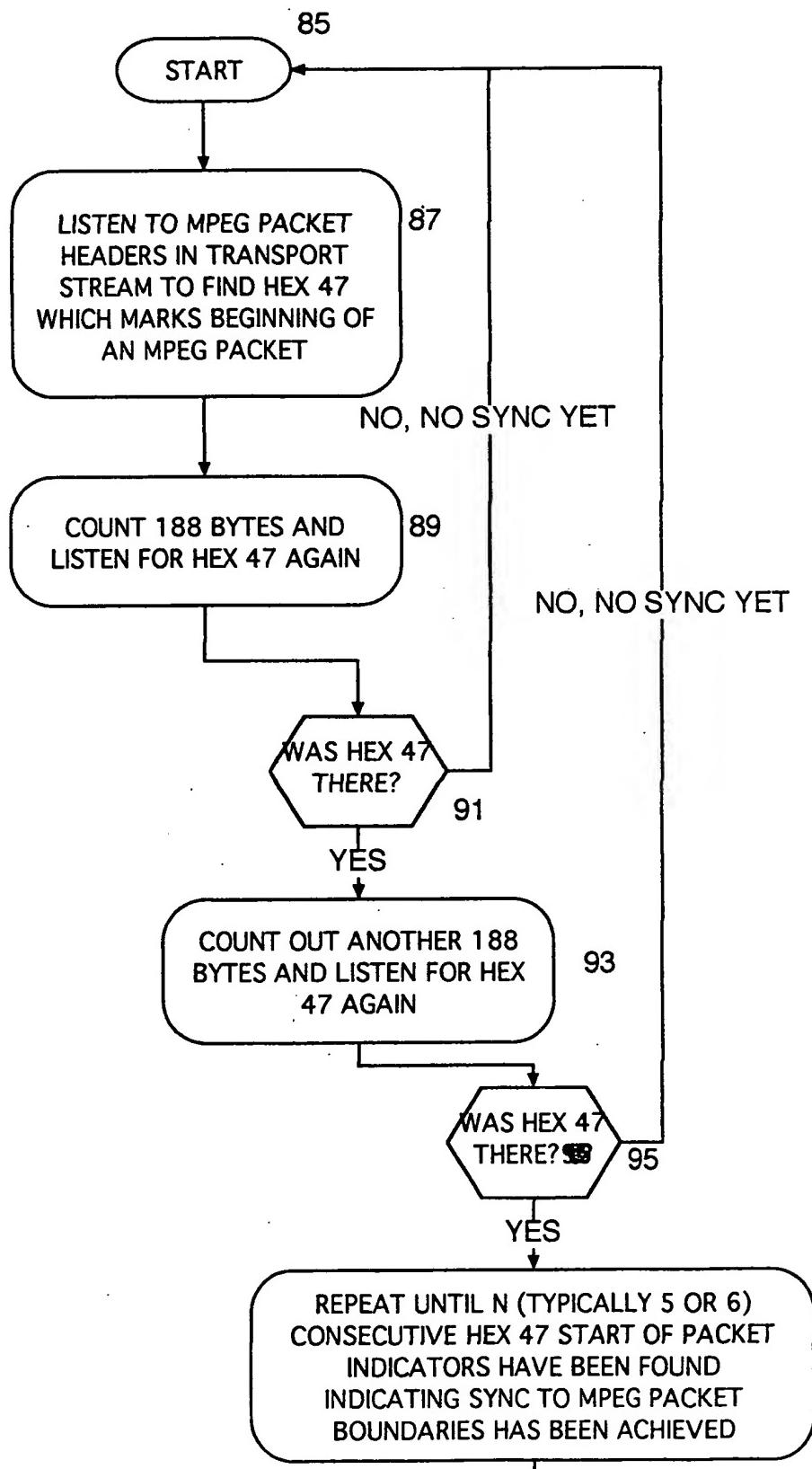


FIG. 4A

000260260260260260

99

START COLLECTING MPEG PACKETS WITH THE SAME PID AND SAME MULTIPLEX OR INPUT WIRE NUMBER IN MULTIPLE BUFFERS AND START A TIMER EACH TIME A NEW BUFFER FILLING PROCESS IS STARTED AND INCREMENT A COUNTER EACH TIME A NEW PID IS DETECTED AND A BUFFER FOR IT IS CREATED

101

SET BUFFER POINTER i TO BEGINNING BUFFER NUMBER

DONE

103

HAS BUFFER i COLLECTED 7 MPEG PACKETS WITH THE SAME PID YET?

NOT DONE

113

COMPARE INCREMENTED i TO CURRENT COUNT OF HOW MANY PID BUFFERS EXIST TO DETERMINE IF REACHED END OF BUFFERS

107

WRITE ALL MPEG PACKETS IN BUFFER i INTO PAYLOAD SECTION OF AN IP PACKET AND PURGE BUFFER i AND RESET TIMER FOR BUFFER i

NO

111

105

INCREMENT BUFFER POINT i BY 1

HAS TIMER FOR THIS BUFFER TIMED OUT YET?

109

WRITE HOWEVER MANY PACKETS HAVE BEEN COLLECTED IN BUFFER i INTO THE PAYLOAD SECTION OF AN IP PACKET, PURGE BUFFER i AND RESET TIMER FOR BUFFER i

GENERATE THE IP MULTICAST ADDRESS FOR THE IP PACKET BEING CREATED USING THE PID OF ALL ENCAPSULATED MPEG PACKETS AND THE MULTIPLEX OR WIRE NUMBER ON WHICH THEY ARRIVED

115

FIG. 4B

ENCAPSULATE IP PACKET INTO ETHERNET PACKET AND GENERATE ETHERNET STATION ADDRESS IN SAME WAY AS INDICATED IN FIG. 3, STEP 45

117

OUTPUT ETHERNET PACKET TO PACKET SWITCH AND START OVER FOR NEW INCOMING MPEG PACKETS, AND, OPTIONALLY, RESET PID BUFFER COUNTER AND CLEAR PID/MULTIPLEX LIST

119

PROCESS OF GENERATING MPEG TRANSPORT STREAMS  
IN CHERRYPICKER SWITCHES

00000000000000000000000000000000

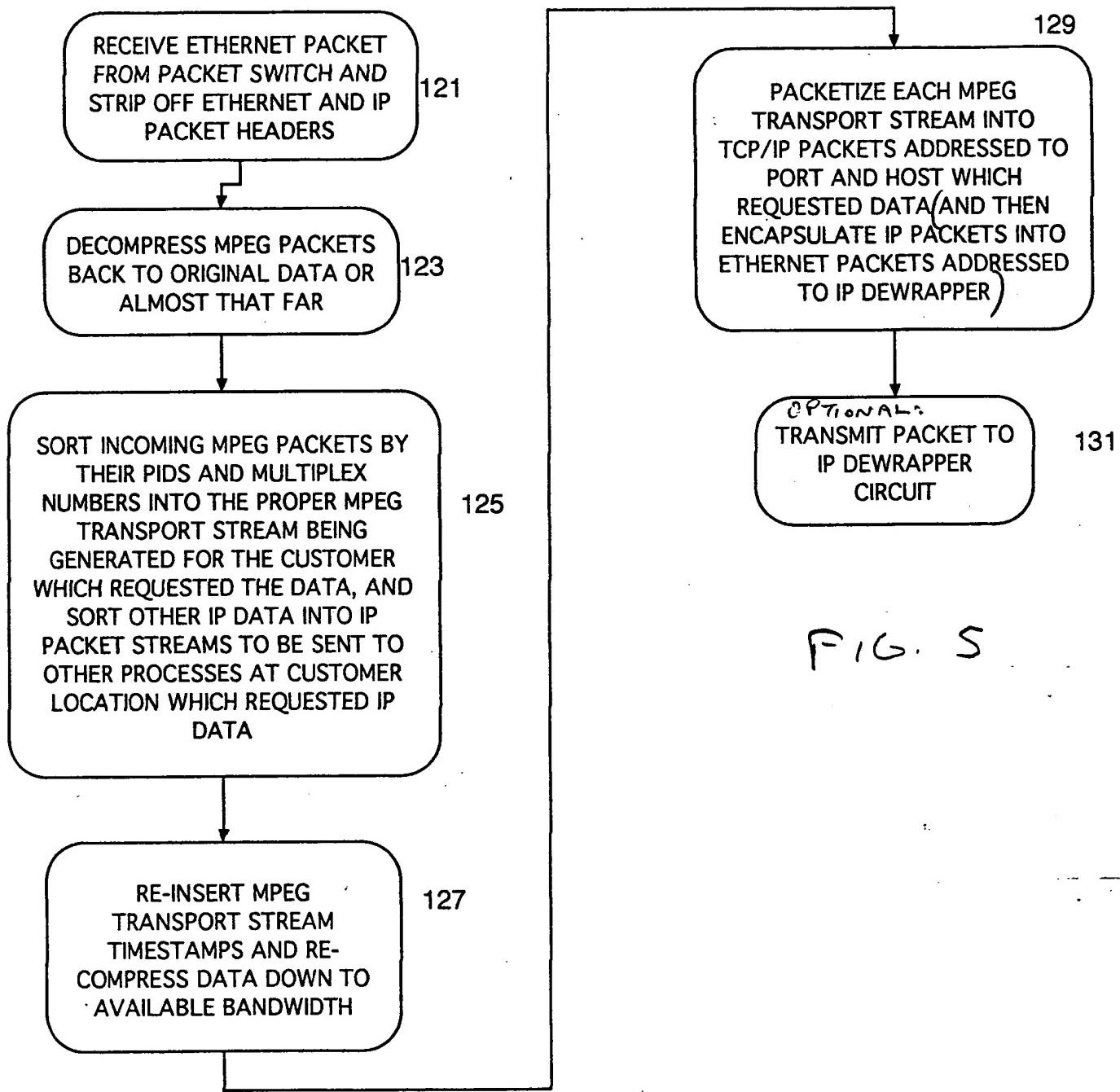


FIG. 5

IP DEWRAPPER PROCESS FOR DSL OR HFC ENVIRONMENTS

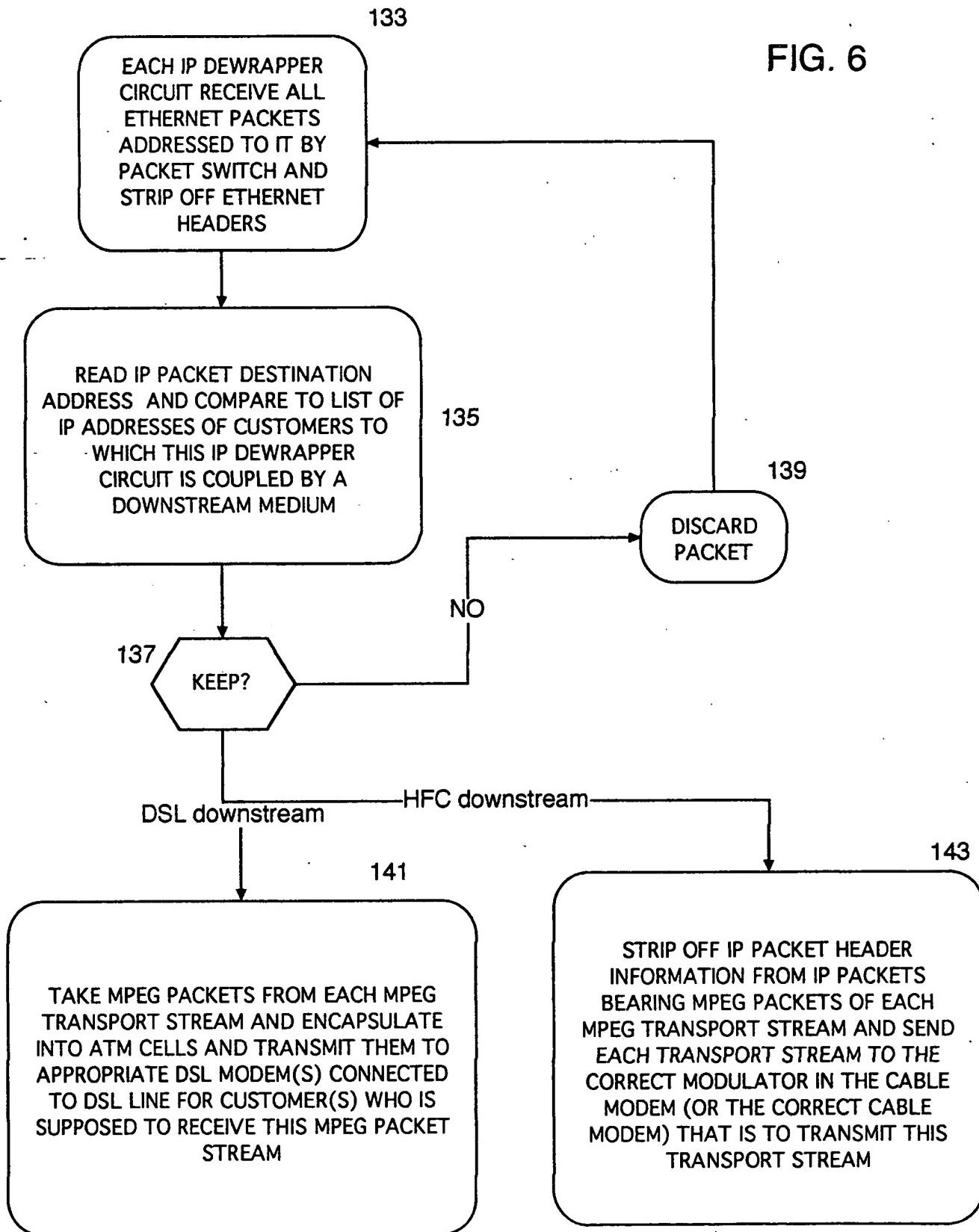
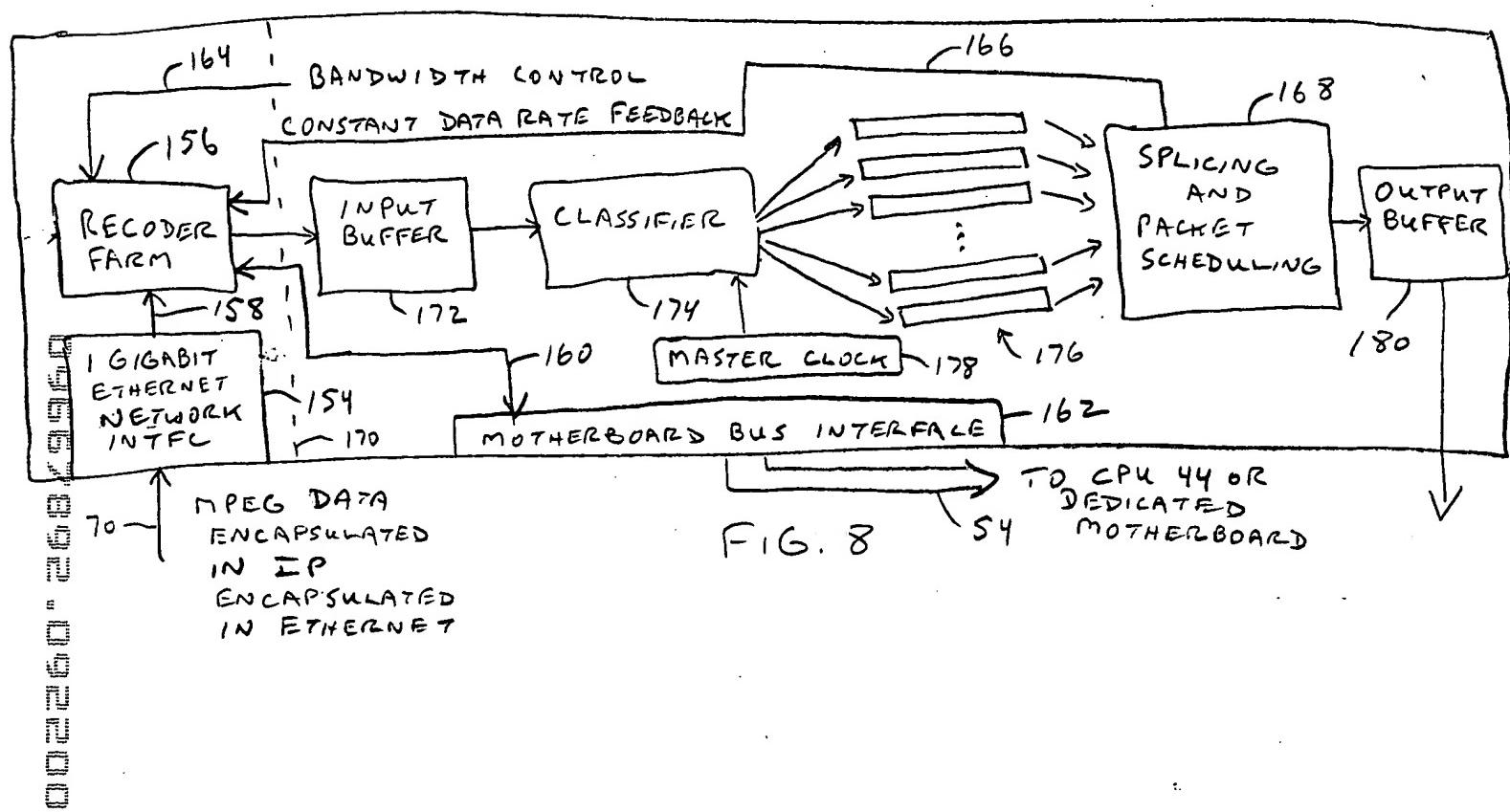
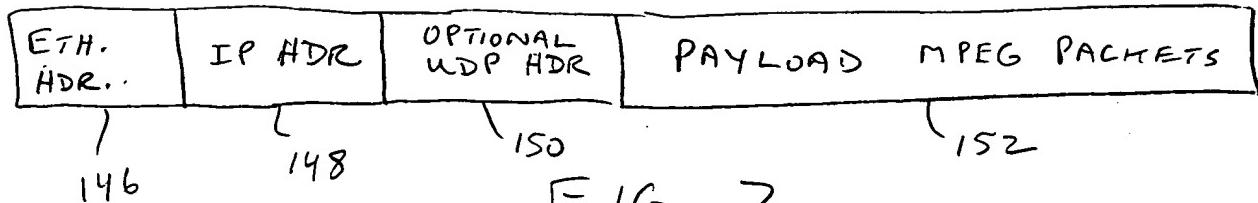


FIG. 6



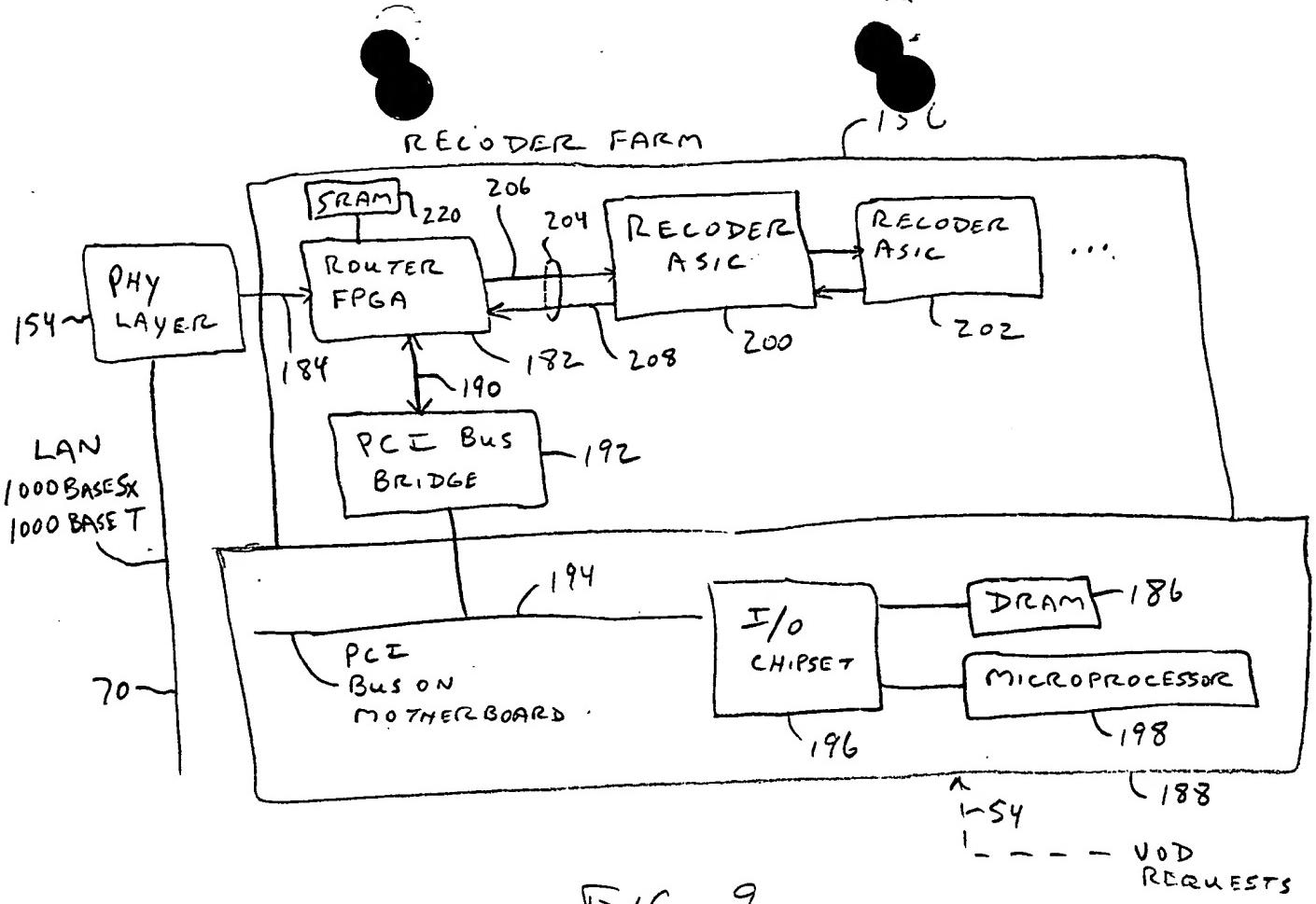


FIG. 9

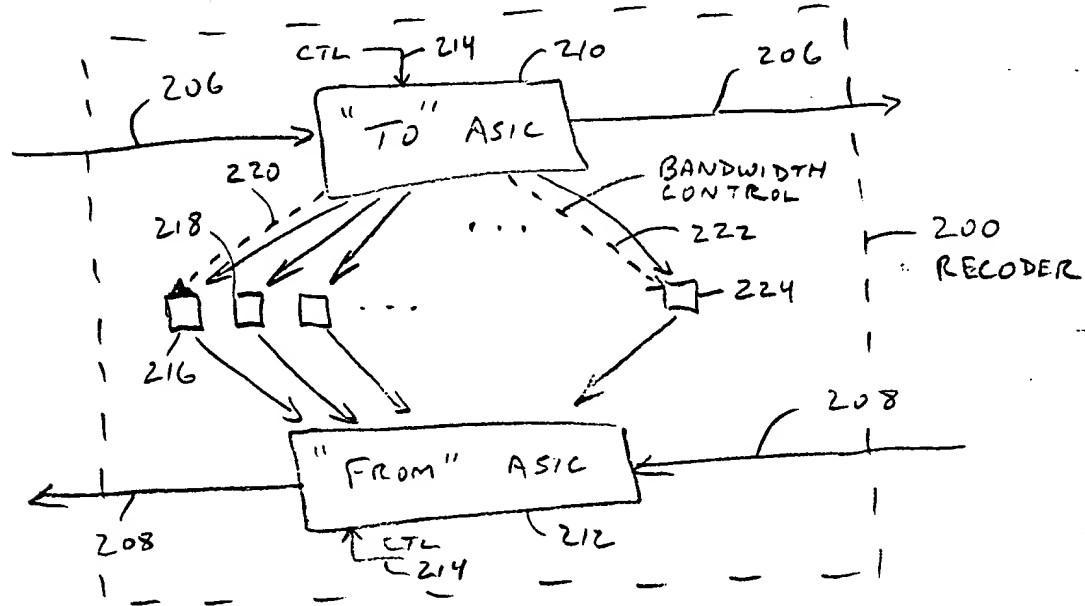


FIG. 10

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HEADEND ARCHITECTURE TO SEND DATA AND  
VOD AND/OR BROADCAST DATA TO CUSTOMERS  
VIA HFC

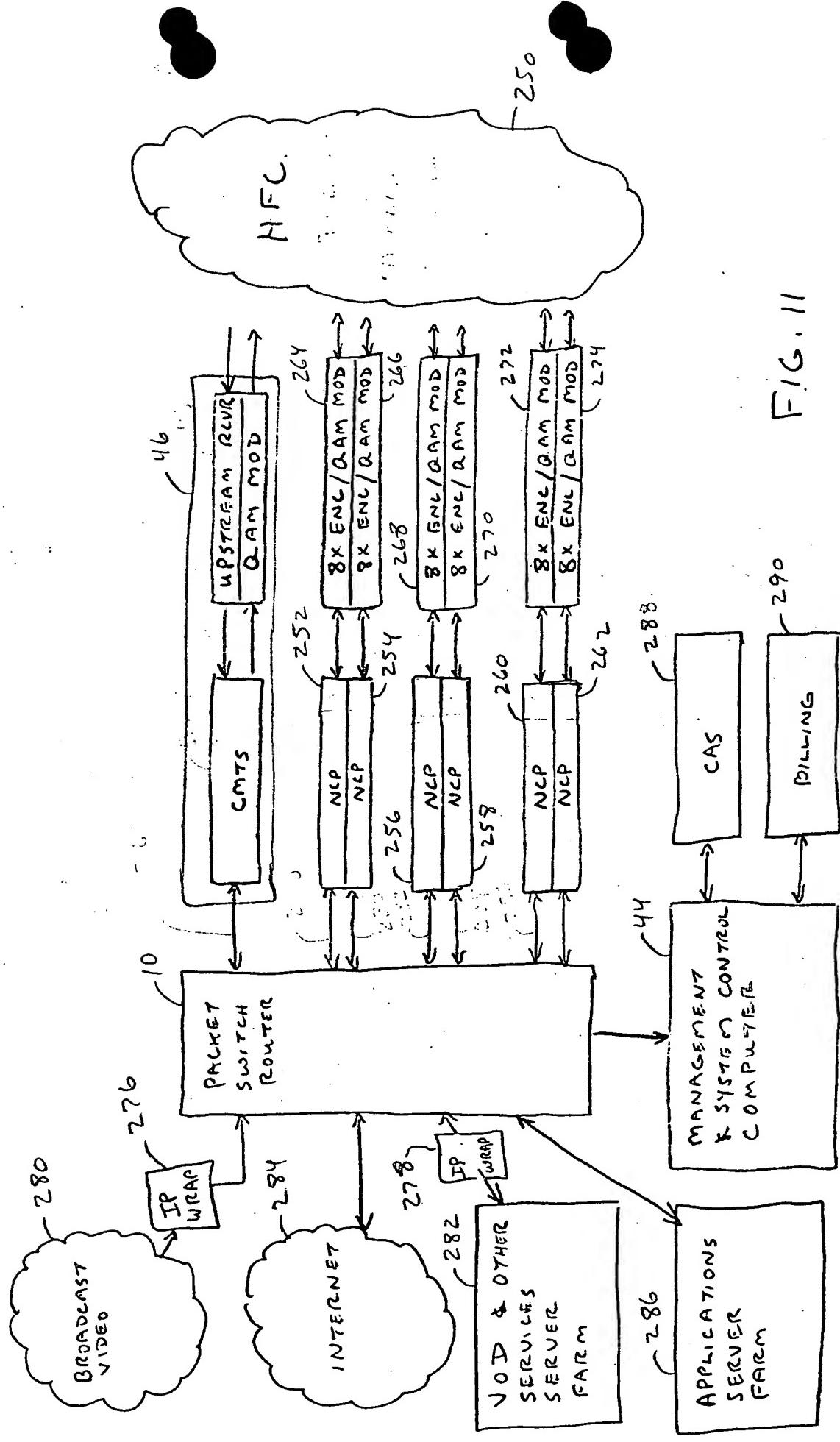


FIG. 11

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EMBODIMENT FOR TRANSMISSION OF DATA AND VIDEO  
PROGRAM DATA FROM HEADEND TO CUSTOMERS

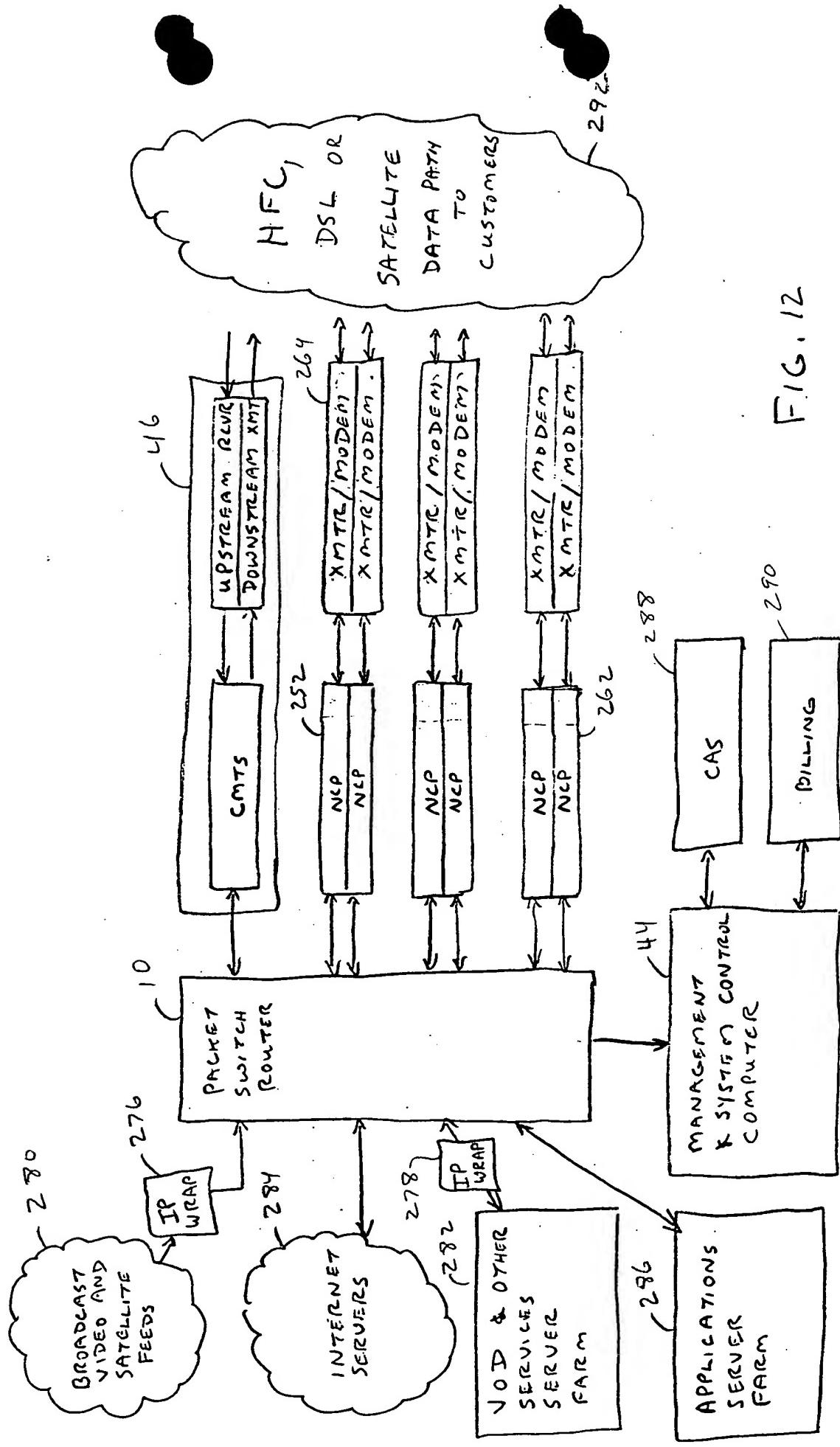


FIG. 12